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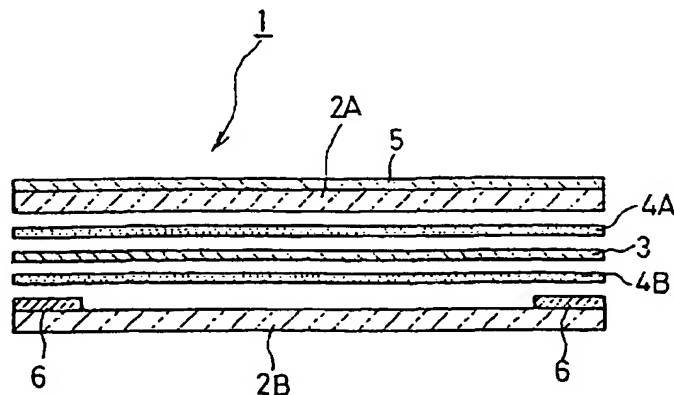
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(54) **Light transmitting laminated plate for electromagnetic shielding**

(57) An electromagnetic-wave shielding and light transmitting plate or a panel laminated plate is formed by interposing an electromagnetic-wave shielding and heat ray blocking layer between two transparent base plates or between a transparent base plate and a PDP body and integrally bonding them together by adhesive

intermediate films. The electromagnetic-wave shielding and heat ray blocking film is made by laminating oxide transparent conductive films and metal thin films in nine layers on a base film, or further laminating a titanium nitride film and an oxide transparent conductive film on a multi-layered film composed of oxide transparent conductive films and metal thin films on a base film.

Fig.1



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Application Number

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	WO 98 13850 A (AJIKATA TOSHIHIRO ;OSADA KOUICHI (JP); AIKAWA KATSUAKI (JP); MORIW) 2 April 1998 (1998-04-02) * abstract *	1,2,4,5, 7,8,10, 11	H05K9/00 H01J11/02 H01J29/86
P,X	-& EP 0 949 648 A (ASAHI GLASS COMPANY LTD) 13 October 1999 (1999-10-13) * page 3, line 32-53 * * page 4, line 17-21 * * page 4, line 48-57 * * page 6, line 4-18,47-53 * * page 7, line 48 - page 8, line 3 * * page 8, line 39-49 * ---	1,2,4,5, 7,8,10, 11	
X	EP 0 908 920 A (BRIDGESTONE CORP) 14 April 1999 (1999-04-14) * column 9, line 46 - column 10, line 25; figure 1 * * column 32, line 50-54 * ---	1-6 7,9,10, 12	
A,D	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 09, 30 July 1999 (1999-07-30) & JP 11 119666 A (BRIDGESTONE CORP), 30 April 1999 (1999-04-30) * abstract * & EP 0 908 920 A (BRIDGESTONE) 14 April 1999 (1999-04-14) ---	1,4,7,10	TECHNICAL FIELDS SEARCHED (Int.Cl.7) H05K H01J
A,D	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 09, 30 July 1999 (1999-07-30) & JP 11 097880 A (BRIDGESTONE CORP), 9 April 1999 (1999-04-09) * abstract * --- -/--	1,4,7,10	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 December 2001	Examiner Schneider, F
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (InLCI.7)
A,D	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 08, 30 June 1999 (1999-06-30) & JP 11 074683 A (BRIDGESTONE CORP), 16 March 1999 (1999-03-16) * abstract *	1,4,7,10	
			TECHNICAL FIELDS SEARCHED (InLCI.7)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 December 2001	Examiner Schneider, F
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 (3.02 (P04021))

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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 00 30 4394

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-12-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9813850	A	02-04-1998	EP WO 0949648 A1 9813850 A1	13-10-1999 02-04-1998
EP 0908920	A	14-04-1999	JP 11119674 A JP 11119667 A JP 11119668 A JP 11119669 A JP 11119670 A JP 11119671 A JP 11119672 A JP 11119666 A JP 11119673 A EP 0908920 A2 US 6255778 B1	30-04-1999 30-04-1999 30-04-1999 30-04-1999 30-04-1999 30-04-1999 30-04-1999 30-04-1999 30-04-1999 14-04-1999 03-07-2001
JP 11119666	A	30-04-1999	EP US 6255778 B1	14-04-1999 03-07-2001
JP 11097880	A	09-04-1999	NONE	
JP 11074683	A	16-03-1999	EP 1028611 A2 EP 0887834 A2 US 6090473 A US 6262364 B1	16-08-2000 30-12-1998 18-07-2000 17-07-2001

EPO FORM P0469

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82